New discoveries of *Pseudochazara mamurra amymone* Brown, 1976 (Lepidoptera: Nymphalidae, Satyrinae)

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Abstract: *Pseudochazara amymone* was missed since its description more than 30 years ago. The exact type locality and the status of *P. amymone* were subject of many speculations. Newer records in Greece by Lazaros Pamperis are doubtful, because all are evidenced by photos only. Generally photos are not sufficent to prove determination in difficult taxa like *Pseudochazara.* Since a few years it became possible to travel and look for butterflies in Albania after the country opened its borders as a consequence of government changes. *Pseudochazara amymone* was found in Albania for the first time and it is illustrated here. It was accompanied by *Pseudochazara mniszechii tisiphone* Brown, 1980, also found in Albania for the first time. The new material of *P. amymone* confirms the status as a subspecies of *P. mamurra* and documents the real existence of this legendary butterfly.

Neue Funde von *Pseudochazara mamurra amymone* Brown, 1976 (Lepidoptera: Nymphalidae, Satyrinae)

Zusammenfassung: *Pseudochazara amymone* galt seit seiner Entdeckung in Griechenland als verschollen. Über den Typenfundort und den Status von *P. amymone* wurde jahrzehntelang wild spekuliert. Neuere Funde in Griechenland durch Lazaros Pamperis sind zweifelhaft, da er ausschließlich Beobachtungen und Fotos gemacht hatte. Fotos sind als Belege bei schwierigen Gruppen wie *Pseudochazara* nicht ausreichend. Durch den politischen Wandel und die Öffnung Albaniens in neuester Zeit bestand die Möglichkeit, dort nach neuen Fundorten zu suchen. Hier werden erstmals Tiere aus Albanien abgebildet, die eindeutig zu *P. amymone* gehören. Das neue Vorkommen beweist die Existenz der verschollenen Art auf dem Balkan und bestätigt die Einordnung als Unterart zu *P. mamurra*. Ebenfalls neu für Albanien ist der Fund von *Pseudochazara mniszechii tisiphone* Brown, 1980, die mit *amymone* sympatrisch vorkommt.

Introduction

In 1976 John Brown described *Pseudochazara amymone* as a new species based on 4 ♂♂. As type locality he wrote "mountains just N of Ioannina, Epiros, Greece, 650 m". He compared the specimens with *Pseudochazara cingovskii* Gross, 1973, which he found in the area "near Ioannina in N Greece ... from three localities on scree slopes at about 1200 m". Later (Brown 1980) he named the latter taxon *Pseudochazara cingovskii tisiphone* giving the locality as "Mt. Smolikas, Greece, 1200 m". Mt. Smolikas is located about 50 km north of Ioannina. He kept the exact locality of his *amymone* secret in order to protect this population. Since that time many entomologists tried to rediscover this species in Greece and, so far known (Cuvelier 2010), only Lazaros Pamperis reported success (Pamperis 1997, 2009).

The status of the Balkan taxa of *Pseudochazara* were discussed and changed frequently. Hesselbarth et al. (1995) placed *Pseudochazara cingovskii tisiphone* as subspecies to *Pseudochazara mniszechii* (Herrich-Schäffer, [1851]), also inhabiting Uludağ in western Turkey. More recent standard books (Tolman & Lewington 2008, Tshikolovets, 2011) followed that opinion but kept the very closely related taxa *Pseudochazara cingovskii* (Gross, 1973) and *Pseudochazara orestes* de Prins & van der Poorten, 1981 as separate species. Gross (1978) was the first to place *Pseudochazara amymone* as subspecies to *Pseudochazara mamurra* (Herrich-Schäffer, [1846]). Eckweiler (2004) agreed with that arrangement although no material of *amymone* was publically available then.

Recently a colleague reported on the beauty and safety of Albania, a nearly forgotten country on the Balkan peninsula which has recently opened its borders after about 50 years of tyranny and civil war. In order to find new localities I immediately planned to search for *Pseudochazara mamurra amymone* in Albania. During a first visit in July 2010 I found a single ♂. The feedback of specialists on this discovery was between doubt and tribute. A second visit to Albania in July 2011 was neccesary to confirm this result.

Recent records of *Pseudochazara mamurra amymone*

Pamperis (1997: 351) figured one ♂ photographed 1989 in Greece, Macedonia. Also in the second edition of the book (Pamperis 2009: 501, fig. 551/13) he presented the same photo. This butterfly displayed is much worn but it can likely be recognized as a ♂ of *Pseudochazara mniszechii tisiphone* (det. Eckweiler). The more recently published photos of one ♀ (Pamperis 2009: 501, figs. 1319/20, 1319/33) taken 2000 in Greece, Epirus, also showed a totally raddled butterfly, but this may be a ♀ of *amymone,* and surely is not a *tisiphone*-♀. However, determination of *Pseudochazara* based only on photos will always be doubtful. Pamperis (2009) observed *amymone* together with *tisiphone* and he commented on it: "considered as a natural hybrid".

In July 2011 I discovered further 5 ♂♂ and 1 ♀ in southern Albania. Three specimens are illustrated here. In order to protect that population the precise locality will not be published at present. Without the "inspiration" of known localities other lepidopterologists have a good chance to find additional new localities of *Pseudochazara mamurra amymone*.

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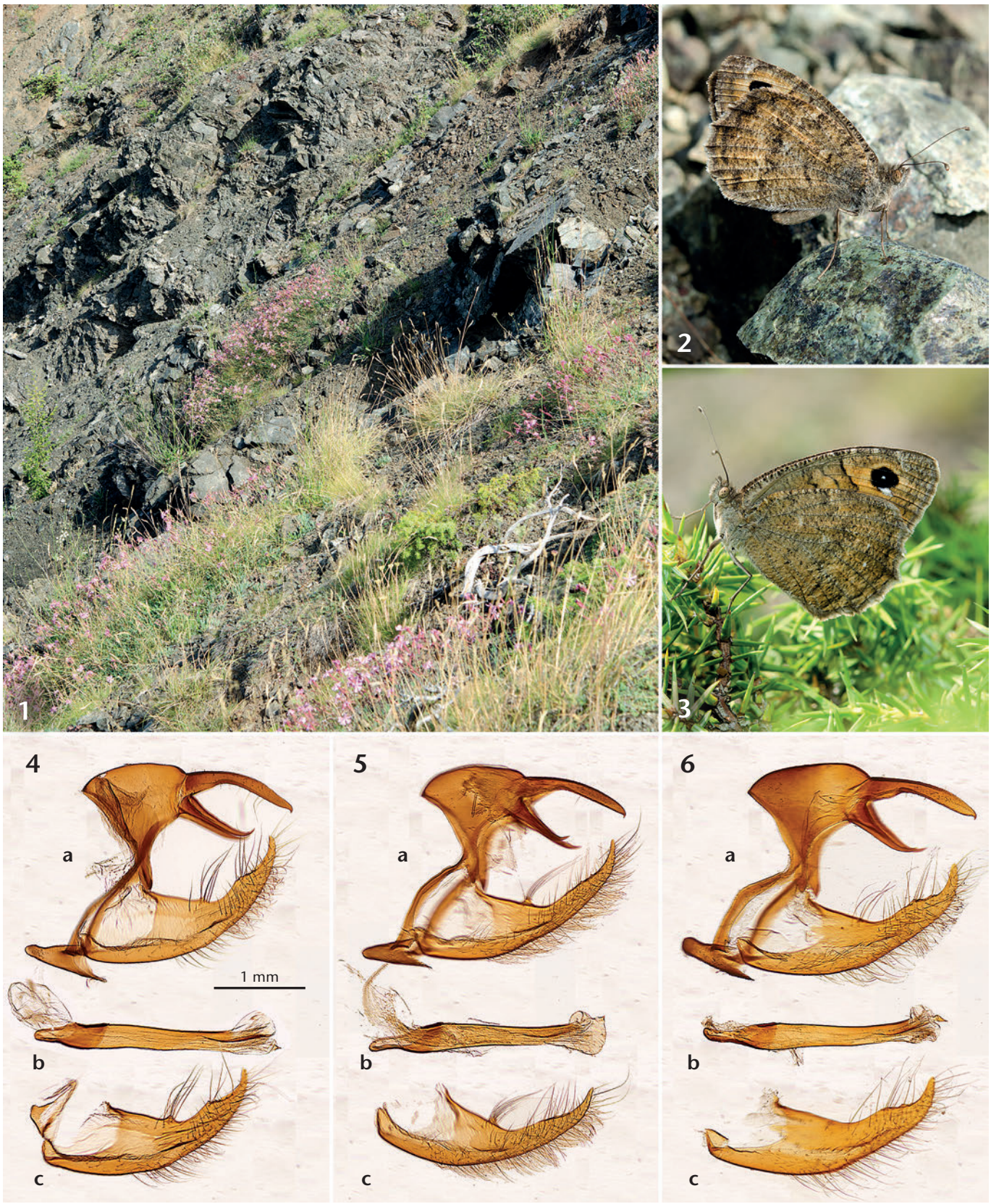

Fig. 1: Biotope of *Pseudochazara mamurra amymone* and *P. mniszechii tisiphone* in southern Albania. **Figs. 2–3.** *P. mniszechii tisiphone,* setteling in the biotope of Fig. 1. **Fig. 2:** ♂, **Fig. 3:** ♀. **Figs. 4–6:** ♂ genitalia of *Pseudochazara mamurra* **(a),** phallus **(b)** and left valva **(c)** detached, all at the same scale. **Fig. 4:** *P. m. amymone*, southern Albania, # GUEC.302. **Fig. 5:** *P. m. birigit*, Elmalı, Antalya, Turkey, # GUEC.301. **Fig. 6:** *P. m. mamurra*, Akçay, Kars, Turkey, # GUEC.218.

Figs. 7–9: *Pseudochazara mamurra amymone*, southern Albania, ca. 1100 m, VII. 2011, leg. ECKWEILER. **Fig. 7:** ♂, #11.012, upperside and underside. **Fig. 8:** ♂, #11.013, upperside and underside. **Fig. 9:** ♀, #11.015, upperside and underside. **Fig. 10:** *Pseudochazara amymone*, holotype ♂, colour scans of the original photos of the description, upperside and underside. **Figs. 11–13:** *Pseudochazara mamurra birgit*. **Fig. 11:** ♂, #11.022: Turkey, Antalya, Elmalı, Kohu Dağl., Dokuz Gölü, 1700–2000 m, 23. VII. 1986, leg. ECKWEILER, upperside and underside. **Fig. 12:** ♀, #11.023: Turkey, Antalya, Elmalı, Bey Dağ, Çamkuyusu, 1900–2200 m, 27. VII. 1995, leg. ECKWEILER, upperside and underside. **Fig. 13:** ♂, #11.026: Turkey, Antalya, Elmalı, Kirdüve Gölü, 1700–2000 m, 20. VII. 1986, leg. ECKWEILER, upperside and underside. **Figs. 14–15.** *P. mniszechii tisiphone*, Albania, ca. 1100 m, VII. 2011, leg. ECKWEILER. **Fig. 14:** ♂, #11.016, upperside and underside. **Fig. 15:** ♀, #11.020, upperside and underside. — All photos W. ECKWEILER (except Fig. 10, courtesy J. BROWN).

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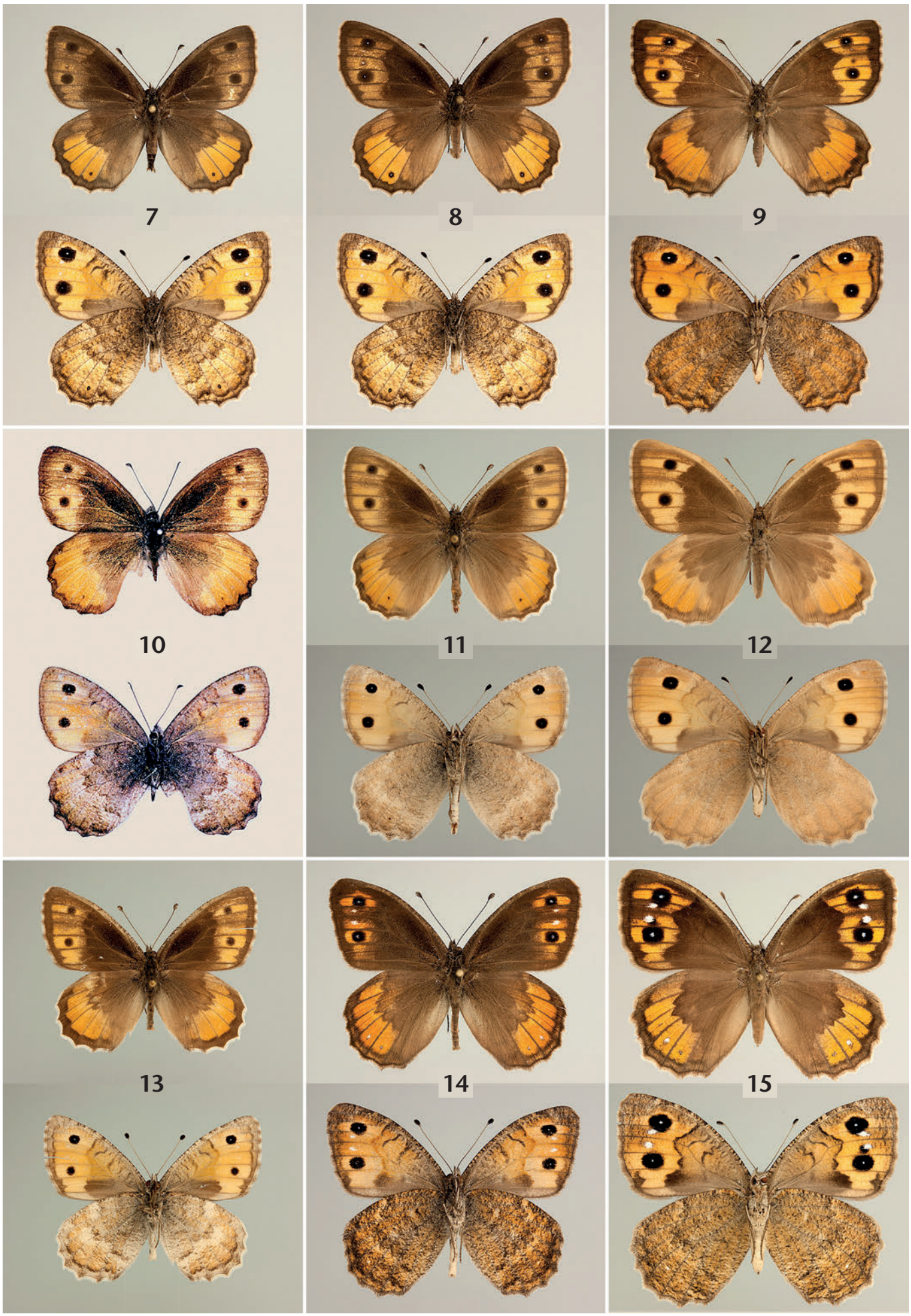

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Observations

In southern Albania *Pseudochazara mamurra amymone* occurs syntopically with *Pseudochazara mniszechii tisiphone*. The latter is much more common. Neither other *Pseudochazara* species nor hybrids between these species were found in that biotope. The biotope is a typical stony slope with some shrubs at an altitude of about 1100 m (Fig. 1).

P. mamurra amymone is very shy. Usually after a specimen settles on the ground it becomes very difficult to approach it. Therefore I could not take any photo of a living specimen.

P. mniszechii tisiphone was not so extremely shy, so ♂ and ♀ are illustrated here (Figs. 2, 3). *P. mniszechii tisiphone* is also new for Albania.

Rebel & Zerny (1931) found only one *Pseudochazara* species, *P. geyeri occidentalis* (Rebel & Zerny, 1931), but its type locality is located in the Republic of Macedonia today.

P. geyeri occidentalis and one further *Pseudochazara*-species may also occur in Albania: *Pseudochazara graeca coutsisi* Brown, 1977 was found very close to the Albanian border.

Taxonomic position of *Pseudochazara mamurra amymone*

Pseudochazara mamurra (Herrich-Schäffer, [1846]) is distributed from the Balkan peninsula to Eastern Iran. Eckweiler (2004) contains a summary of the 9 subspecies of *P. mamurra* and their distribution:

- ssp. *mamurra* (Herrich-Schäffer, [1846])
- ssp. *sintenisi* (Staudinger, 1895)
- ssp. *birgit* Gross, 1978
- ssp. *larseni* Koçak, 1978
- ssp. *amymone* Brown, 1976
- ssp. *nukatli* Bogdanov, 2000
- ssp. *schahrudensis* (Staudinger, 1881)
- ssp. *kermana* Eckweiler, 2004
- ssp. *taftana* Eckweiler, 2004

Some subspecies are so distinct that they were often treated as separate species: ssp. *sintenisi,* ssp. *schahrudensis,* ssp. *nukatli* and ssp. *amymone*. In the case of *sintenisi* and *scharudensis* the typical populations are connected by intermediate specimens confirming their subspecific status. The subspecies *amymone, larseni, nukatli* and *taftana* are allopatric and isolated from the central distribution area of the polytypic species *mamurra*. Their total distribution pattern fits well in that known from other butterfly species. A number of Middle East butterfly species have vicariances in the Balkan countries, e.g. *Colias caucasica balcanica* Rebel, 1903. *Proterebia afra dalmata* (Godart, 1824), *Coenonympha leander orientalis* Rebel, 1910 *Pseudochazara geyeri occidentalis* (Rebel & Zerny, 1931), *Pseudochazara mniszechi tisphone* Brown, 1980, *Lycaena (Thersamonia) thetis hephestos* (Dils & van der Poorten, 1985), *Turanana endymion taygetica* Rebel, 1902, *Agriades pyrenaicus dardanus* (Freyer, 1844), *Polyommatus (Agrodiaetus) admetus admetus* (Esper, [1783]), *Polyommatus (Agrodiaetus) iphigenia nonacriensis* (Brown, 1977), *Polyommatus (Neolysandra) coelestina hera* (Eckweiler & Schurian, 1980). All of them are glacial relics and found very locally in the Balkan peninsula. Most of them are kept in the rank of a subspecies, only a few are discussed either as synonyms or good species.

The ♂ genitalia of *amymone* (Fig. 4) resemble those of *P. mamurra* (Figs. 5–6) and prove the very close relationship to *P. mamurra.* Therefore, *P. amymone* is treated here as a subspecies of *P. mamurra*.

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